Tornado T6M, T8M & T10M 3 Axis Turning

The Tornado T6M, T8M & T10M 3 Axis CNC Lathes are true precision turning centers with Turret Mounted Powered Tooling, controlled from the state-of-the-art G.E. Fanuc 21i TB control. 'M' models have all the machine design features as the 2 axis models with the added production flexibility of live tooling.

Features

- Tornado T6M, T8M & T10M offers milling power for both radial and axial milling, drilling, boring and tapping operations
- Live turret mounted tooling adds flexibility and large production gains by cutting the number of set-ups and operations
- Tornado "M" models are fitted with a linear scale on the X axis to maintain high accuracy even during ‘off center’ operations
- Powerful live tooling drive motor for real milling power, 5 hp on T6M & T8M, 7.5 hp on T10M
- High powered tool cutting speeds, up to 5000 rpm on T6M models and 4000 rpm on T8M & T10M models
- Twelve station high speed bi-directional turret with 12 powered stations on T6M & T10M models and 6 powered stations on T8M
- C axis positioning increment of 0.001° is fully programmable
- C axis contouring selected by M-code
- Quick changeover and set-up with VDI 30 tooling on T6M models and VDI 40 on T8M & T10M models
- Optional CAM system software package, designed to run on virtually any PC, developed for more complex 3 axis programming
- Available in Chucker, Barfeed and Unmanned 'Lights-Out' models
### Models

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Chuck Type</th>
<th>rpm</th>
<th>Max Bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6MA</td>
<td>6.7&quot; Hyd</td>
<td>6000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T6MB</td>
<td>8.26&quot; Hyd</td>
<td>4000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T6MAB Bar Feed</td>
<td>Collet</td>
<td>6000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T6MBB Bar Feed</td>
<td>Collet</td>
<td>4000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T6MAL Lights-Out</td>
<td>Collet</td>
<td>6000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T6MBL Lights-Out</td>
<td>Collet</td>
<td>4000</td>
<td>2.12&quot; (54mm)</td>
</tr>
<tr>
<td>T8MA</td>
<td>8.26&quot; Hyd</td>
<td>5000</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T8MB</td>
<td>10&quot; Hyd</td>
<td>3500</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T8MAB Bar Feed</td>
<td>Collet</td>
<td>5000</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T8MBB Bar Feed</td>
<td>Collet</td>
<td>3500</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T8MAL Lights-Out</td>
<td>Collet</td>
<td>5000</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T8MBL Lights-Out</td>
<td>Collet</td>
<td>3500</td>
<td>2.59&quot; (66mm)</td>
</tr>
<tr>
<td>T10MA</td>
<td>10&quot; Hyd</td>
<td>4000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>T10MB</td>
<td>12&quot; Hyd</td>
<td>3000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>T10MAB Bar Feed</td>
<td>Collet</td>
<td>4000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>T10MBB Bar Feed</td>
<td>Collet</td>
<td>3000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>T10MAL Lights-Out</td>
<td>Collet</td>
<td>4000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>T10MBL Lights-Out</td>
<td>Collet</td>
<td>3000</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Tornado 3 Axis</th>
<th>T6M</th>
<th>T8M</th>
<th>T10M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swing over bed cover</td>
<td>17.32&quot; (440mm)</td>
<td>20.07&quot; (510mm)</td>
<td>23.62&quot; (600mm)</td>
</tr>
<tr>
<td>Max. turned diameter</td>
<td>8.46&quot; (215mm)</td>
<td>11.42&quot; (290mm)</td>
<td>14.17&quot; (360mm)</td>
</tr>
<tr>
<td>X axis travel</td>
<td>7.87&quot; (200mm)</td>
<td>9.25&quot; (235mm)</td>
<td>10.63&quot; (270mm)</td>
</tr>
<tr>
<td>Max. turning length</td>
<td>17.72&quot; (450mm)</td>
<td>21.26&quot; (540mm)</td>
<td>23.62&quot; (600mm)</td>
</tr>
<tr>
<td>Spindle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spindle nose</td>
<td>A2-5</td>
<td>A2-6</td>
<td>A2-8</td>
</tr>
<tr>
<td>Power chuck (type A/B)</td>
<td>6.7&quot;/8.27&quot; (170/210mm)</td>
<td>8.26&quot;/10&quot; (210/254mm)</td>
<td>10&quot;/12&quot; (254/305mm)</td>
</tr>
<tr>
<td>Front bearing I/D</td>
<td>3.54&quot; (90mm)</td>
<td>4.33&quot; (110mm)</td>
<td>5.12&quot; (127mm)</td>
</tr>
<tr>
<td>Spindle bore</td>
<td>2.52&quot; (64mm)</td>
<td>3.05&quot; (77.5mm)</td>
<td>3.56&quot; (90.5mm)</td>
</tr>
<tr>
<td>Bar capacity</td>
<td>2.12&quot; (54mm)</td>
<td>2.59&quot; (65mm)</td>
<td>3.25&quot; (82.5mm)</td>
</tr>
<tr>
<td>Max. spindle speed (A/B) (rpm)</td>
<td>6000/4000</td>
<td>5000/3500</td>
<td>4000/3000</td>
</tr>
<tr>
<td>Spindle motor (Cont./30 min.)</td>
<td>15/20 hp (11/15kW)</td>
<td>25/30 hp (19/22kW)</td>
<td>30/35 hp (19/22kW)</td>
</tr>
<tr>
<td>Spindle speed @ full Hp (A/B)</td>
<td>1500/1000 rpm</td>
<td>1250/880 rpm</td>
<td>597/448 rpm</td>
</tr>
<tr>
<td>Axes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid traverse X/Z-axis</td>
<td>984/1181 ipm (25/255mpm)</td>
<td>984/1181 ipm (30/255mpm)</td>
<td>984/1181 ipm (30/255mpm)</td>
</tr>
<tr>
<td>X/Z-axis thrust (continuous)</td>
<td>800/1,000 lbf (3.75/4.44 kN)</td>
<td>1,330/1,610 lbf (5.91/7.15 kN)</td>
<td>1,330/1,610 lbf (5.91/7.15 kN)</td>
</tr>
<tr>
<td>X/Z-axis ballscrew</td>
<td>32x8/32x10 mm</td>
<td>32x8/40x10 mm</td>
<td>32x8/40x10 mm</td>
</tr>
<tr>
<td>X/Z-axis encoder feedback</td>
<td>linear/rotary</td>
<td>linear/rotary</td>
<td>linear/rotary</td>
</tr>
<tr>
<td>Positioning accuracy</td>
<td>±0.0002 (0.005mm)</td>
<td>±0.0002 (0.005mm)</td>
<td>±0.0002 (0.005mm)</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.0001 (0.002mm)</td>
<td>±0.0001 (0.002mm)</td>
<td>±0.0001 (0.002mm)</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carriage inclination</td>
<td>60°</td>
<td>60°</td>
<td>60°</td>
</tr>
<tr>
<td>Spindle center height</td>
<td>37.40&quot; (950mm)</td>
<td>37.79&quot; (960mm)</td>
<td>38.46&quot; (977mm)</td>
</tr>
<tr>
<td>Cross slide width</td>
<td>9.45&quot; (240mm)</td>
<td>10.35&quot; (263mm)</td>
<td>10.35&quot; (263mm)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Cross slide type</td>
<td>20mm roller guides</td>
<td>35mm roller guides</td>
<td>35mm roller guides</td>
</tr>
<tr>
<td>Width across cross guides ways</td>
<td>8.15&quot; (207mm)</td>
<td>8.9&quot; (226mm)</td>
<td>8.9&quot; (226mm)</td>
</tr>
<tr>
<td>Z-axis type</td>
<td>20mm roller guides</td>
<td>35mm roller guides</td>
<td>35mm roller guides</td>
</tr>
<tr>
<td>Bed width - linear guide rails</td>
<td>12.91&quot; (328mm)</td>
<td>15.35&quot; (390mm)</td>
<td>15.35&quot; (390mm)</td>
</tr>
<tr>
<td>Tool Turret</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turret disc diameter</td>
<td>14.57&quot; (370mm)</td>
<td>17.32&quot; (440mm)</td>
<td>18.58&quot; (472mm)</td>
</tr>
<tr>
<td>Tooling system</td>
<td>VDI 30</td>
<td>VDI 40</td>
<td>VDI 40</td>
</tr>
<tr>
<td>No. of turret tool stations</td>
<td>12 bi-directional</td>
<td>12 bi-directional</td>
<td>12 bi-directional</td>
</tr>
<tr>
<td>Index time</td>
<td>0.45 sec</td>
<td>0.45 sec</td>
<td>0.45 sec</td>
</tr>
<tr>
<td>Tool shank size</td>
<td>3/4&quot;x3/4&quot; (20x20mm)</td>
<td>1&quot;x1&quot; (25.4x25.4mm)</td>
<td>1&quot;x1&quot; (25.4x25.4mm)</td>
</tr>
<tr>
<td>Max. boring bar</td>
<td>1.25&quot; (32mm)</td>
<td>1.57&quot; (40mm)</td>
<td>1.57&quot; (40mm)</td>
</tr>
<tr>
<td>Travel past center line</td>
<td>1.06&quot; (27mm)</td>
<td>1.06&quot; (27mm)</td>
<td>1.06&quot; (27mm)</td>
</tr>
<tr>
<td>Live Tooling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-axes min. increment</td>
<td>.001°</td>
<td>.001°</td>
<td>.001°</td>
</tr>
<tr>
<td>Power driven stations</td>
<td>12</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Power station servo motor</td>
<td>5 hp</td>
<td>5hp</td>
<td>7.5hp</td>
</tr>
<tr>
<td>Rotating tool shank size</td>
<td>DIN5482 15x12</td>
<td>DIN5482 17x14</td>
<td>DIN5482 20x0.8</td>
</tr>
<tr>
<td>Maximum tool speed</td>
<td>5000 rpm</td>
<td>4000 rpm</td>
<td>4000 rpm</td>
</tr>
<tr>
<td>Maximum collet size</td>
<td>0.625&quot; (16mm)</td>
<td>0.75&quot; (20mm)</td>
<td>0.75&quot; (20mm)</td>
</tr>
<tr>
<td>Coolant, Space &amp; Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coolant tank capacity</td>
<td>26 gal. (100 litres)</td>
<td>40 gal. (150 litres)</td>
<td>40 gal. (150 litres)</td>
</tr>
<tr>
<td>Coolant pump delivery</td>
<td>6.6 gal/min (25 litres/min)</td>
<td>6.6 gal/min (25 litres/min)</td>
<td>6.6 gal/min (25 litres/min)</td>
</tr>
<tr>
<td>Maximum power consumption</td>
<td>28kVA</td>
<td>50kVA</td>
<td>37kVA</td>
</tr>
<tr>
<td>Dimensions: L x W</td>
<td>103&quot;x65&quot; (2616x1651mm)</td>
<td>107&quot;x62&quot; (2719x1575mm)</td>
<td>107&quot;x62&quot; (2719x1575mm)</td>
</tr>
<tr>
<td>Approx. net weight</td>
<td>8,818 lbs. (4000kg)</td>
<td>10,031 lbs. (4550kg)</td>
<td>10,251 lbs. (4650kg)</td>
</tr>
<tr>
<td>Optional Tailstock</td>
<td>(retrofittable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tailstock quill diameter</td>
<td>2.48&quot; (63mm)</td>
<td>3.74&quot; (95mm)</td>
<td>3.74&quot; (95mm)</td>
</tr>
<tr>
<td>Tailstock quill taper</td>
<td>3MT</td>
<td>5MT</td>
<td>5MT</td>
</tr>
<tr>
<td>Tailstock quill stroke</td>
<td>4.13&quot; (105mm)</td>
<td>4.92&quot; (125mm)</td>
<td>4.92&quot; (125mm)</td>
</tr>
<tr>
<td>Tailstock body travel</td>
<td>21.25&quot; (540mm)</td>
<td>23.62&quot; (600mm)</td>
<td>23.62&quot; (600mm)</td>
</tr>
<tr>
<td>Max. tailstock quill thrust</td>
<td>1,131 lbf (5.0 kN)</td>
<td>1,768 lbf (7.85 kN)</td>
<td>1,768 lbf (7.85 kN)</td>
</tr>
</tbody>
</table>